

# METHOD AND APPARATUS FOR PREDICTING THE ONSET OF SEIZURES BASED ON FEATURES DERIVED FROM SIGNALS INDICATIVE OF BRAIN ACTIVITY

**Patent number:** EP1107693  
**Publication date:** 2001-06-20  
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**Classification:**  
**- international:** G06F17/00; G06F19/00; G06F17/00; G06F19/00; (IPC1-7): A61B5/04  
**- european:** G06F17/00D4E; G06F19/00A  
**Application number:** EP19990946634 19990824  
**Priority number(s):** WO1999US19387 19990824; US19980097580P 19980824; US19990129420P 19990415

## Also published as:

WO0010455 (A1)  
 WO0010455 (A1)  
 EP1107693 (A1)

## Cited documents:

WO9726823  
 US3863625  
 US5311876  
 US5720294  
 XP008012666

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Abstract not available for EP1107693  
 Abstract of correspondent: **WO0010455**

This invention is a method, and system for predicting the onset of a seizure prior to electrograph onset in an individual. During an "off-line" mode, signals representing brain activity of an individual (either stored or real time) are collected, and features are extracted from those signals. A subset of features, which comprise a feature vector, are selected by a predetermined process to most efficiently predict (and detect) a seizure in that individual. An intelligent prediction subsystem is also trained "off-line" based on the feature vector derived from those signals. During "on-line" operation, features are continuously extracted from real time brain activity signals to form a feature vector, and the feature vector is continuously analyzed with the intelligent prediction subsystem to predict seizure onset in a patient. The system, and method are preferably implemented in an implanted device (102) that is capable of warning externally an individual of the probability of a seizure, and/or automatically taking preventative actions to abort the seizure. In addition, methods are provided for applying intervention measures to an animal to abort or modulate a seizure by adjusting the modality of an intervention measure; and/or parameters of an intervention measure based upon a probability measure indicative of a likelihood of seizure occurrence; and/or a predicted time to seizure onset.



